

METHOD AND APPARATUS FOR FREQUENCY OFFSET ESTIMATION,
AND SYSTEM UTILIZING SAME

ABSTRACT

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A direct current (DC) offset estimation, frequency offset estimation,
and compensation system (200), receives data packet (204) with
preamble (206). A DC offset estimator (210) and a frequency offset
estimator (212) operate concurrently to produce estimates of DC and
10 frequency offsets of the data packet (204), which are determined from a
portion of the preamble (206) as it is received. As the data packet (204)
is received, a compensator (214) receives the estimates of DC and
frequency offsets and compensates the remaining portion of the data
packet (204) to produce a DC and frequency compensated data packet
15 (218). Concurrent operation of the DC estimator (210) and the
frequency offset estimator (212) advantageously allows more time to
produce the estimates of DC and frequency offsets.

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